1

**Basic Algebra Problems**

1. If Lynn can type a page in p minutes, what piece of the page can she do in 5 minutes?

A. 5/p   
B. p - 5   
C. p + 5   
D. p/5   
E. 1- p + 5

2. If Sally can paint a house in 4 hours, and John can paint the same house in 6 hour, how long will it take for

both of them to paint the house together?

A. 2 hours and 24 minutes   
B. 3 hours and 12 minutes   
C. 3 hours and 44 minutes   
D. 4 hours and 10 minutes   
E. 4 hours and 33 minutes

3. Employees of a discount appliance store receive an additional 20% off of the lowest price on an item. If an

employee purchases a dishwasher during a 15% off sale, how much will he pay if the dishwasher originally

cost $450?

A. $280.90   
B. $287   
C. $292.50   
D. $306   
E. $333.89

4. The sales price of a car is $12,590, which is 20% off the original price. What is the original price?

A. $14,310.40   
B. $14,990.90   
C. $15,290.70   
D. $15,737.50   
E. $16,935.80

2

5. Solve the following equation for A : 2A/3 = 8 + 4A

A. -2.4   
B. 2.4   
C. 1.3   
D. -1.3   
E. 0

6. If Leah is 6 years older than Sue, and John is 5 years older than Leah, and the total of their ages is 41. Then

how old is Sue?

A. 8   
B. 10   
C. 14   
D. 19   
E. 21

7. Alfred wants to invest $4,000 at 6% simple interest rate for 5 years. How much interest will he receive?

A. $240   
B. $480   
C. $720   
D. $960   
E. $1,200

8. Jim is able to sell a hand-carved statue for $670 which was a 35% profit over his cost. How much did the

statue originally cost him?

A. $496.30   
B. $512.40   
C. $555.40   
D. $574.90   
E. $588.20

9. The city council has decided to add a 0.3% tax on motel and hotel rooms. If a traveler spends the night in a

motel room that costs $55 before taxes, how much will the city receive in taxes from him?

A. 10 cents   
B. 11 cents   
C. 15 cents   
D. 17 cents   
E. 21 cents

3

10. A student receives his grade report from a local community college, but the GPA is smudged. He took the

following classes: a 2 hour credit art, a 3 hour credit history, a 4 hour credit science course, a 3 hour credit

mathematics course, and a 1 hour science lab. He received a “B” in the art class, an “A” in the history class,

a “C” in the science class, a “B” in the mathematics class, and an “A” in the science lab. What was his GPA

if the letter grades are based on a 4 point scale? (A=4, B=3, C=2, D=1, F=0)

A. 2.7   
B. 2.8   
C. 3.0   
D. 3.1   
E. 3.2

11. Simon arrived at work at 8:15 A.M. and left work at 10: 30 P.M. If Simon gets paid by the hour at a rate of

$10 and time and ½ for any hours worked over 8 in a day. How much did Simon get paid?

A. $120.25   
B. $160.75   
C. $173.75   
D. $180   
E. $182.50

12. Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the

minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?

A. 4   
B. 8   
C. 12   
D. 13   
E. 16

13. If r = 5 z then 15 z = 3 y, then r =

A. y   
B. 2 y   
C. 5 y   
D. 10 y   
E. 15 y

14. If 300 jellybeans cost you x dollars. How many jellybeans can you purchase for 50 cents at the same rate?

A. 150/x   
B. 150x   
C. 6x   
D. 1500/x   
E. 600x

4

15. Lee worked 22 hours this week and made $132. If she works 15 hours next week at the same pay rate,

how much will she make?

A. $57   
B. $90   
C. $104   
D. $112   
E. $122

16. If 8x + 5x + 2x + 4x = 114, the 5x + 3 =

A. 12   
B. 25   
C. 33   
D. 47   
E. 86

17. You need to purchase a textbook for nursing school. The book cost $80.00, and the sales tax where you

are purchasing the book is 8.25%. You have $100. How much change will you receive back?

A. $5.20   
B. $7.35   
C. $13.40   
D. $19.95   
E. $21.25

18. You purchase a car making a down payment of $3,000 and 6 monthly payments of $225. How much have

you paid so far for the car?

A. $3225   
B. $4350   
C. $5375   
D. $6550   
E. $6398

19. Your supervisor instructs you to purchase 240 pens and 6 staplers for the nurse's station. Pens are

purchased in sets of 6 for $2.35 per pack. Staplers are sold in sets of 2 for 12.95. How much will

purchasing these products cost?

A. $132.85   
B. $145.75   
C. $162.90   
D. $225.25   
E. $226.75

20. If y = 3, then y3(y3-y)=

A. 300   
B. 459   
C. 648   
D. 999   
E. 1099

5

Answer Key:  
1. A   
2. A   
3. D   
4. D   
5. A   
6. A   
7. E   
8. A   
9. D   
10. C   
11. C   
12. D   
13. A   
14. A   
15. B   
16. C   
17. C   
18. B   
19. A   
20. C